

If yields continue to rise ...

January 2018

Research Signals

Following global stock markets' best year since 2009 and starting off the year on a continued high level of hubris, investors are now reminded that stocks can go down. The markets ended the month with an attack on the reflation trade as investors contemplate the concept of a bond bear market, as put forth by [Bill Gross](#) and [Ray Dalio](#) in Davos. For most of January, markets celebrated global economic growth which reached a 40-month high, according to the J.P. Morgan Global Manufacturing & Services PMI™, and price momentum trades benefited across many regional markets (Table 1). However, markets were spooked at the end of the month as investors became more sensitive to the outlook of central bank policy and how quickly they will unwind stimulus, while, at the same time, several key developed markets saw 10-year government yields increase in January.

- US: Investors chased high momentum stocks (e.g., Industry-adjusted 12-month Relative Price Strength) at the expense of undervalued names (e.g., Book-to-Market) during the parabolic market run up in January
- Developed Europe: High beta stocks were highly rewarded, detracting from performance of factors such as 60-Month Beta
- Developed Pacific: Japanese markets differed from their regional developed market counterparts, continuing to bid up overvalued names as measured by TTM EBITDA-to-Enterprise Value
- Emerging markets: Key groups that were rewarded by investors for the month included undervalued stocks and high beta names

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Table 1

Global factor quantile return spread performance snapshot, Jan 2018

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		-4.61	-4.83	1.12	0.91	-3.35	2.58
Forward 12-M EPS-to-Enterprise Value	Deep Value	1.25	-2.74	-2.80	0.09	-2.03	1.69
TTM EBITDA-to-Enterprise Value		-4.21	-5.08	-1.08	0.58	-4.09	2.41
TTM Free Cash Flow-to-Enterprise Value		3.78	-1.47	0.46	2.70	-3.82	1.37
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	1.34	3.74	-3.78	3.21	-1.05	1.88
Industry Relative TTM Dividend Yield		1.74	-1.08	-4.01	-4.09	0.87	0.42
Fixed Assets Turnover Ratio	Management Quality	7.48	2.63	3.28	3.07	-0.49	-0.21
Inventory Turnover Ratio		3.65	-0.56	-0.76	-5.38	-3.56	0.50
Net Operating Asset Turnover		6.65	-4.46	-1.64	0.19	-2.96	-0.80
Change in Accruals to Assets	Earnings Quality	0.76	0.23	0.44	1.83	-0.08	0.05
Change in TTM COGS vs. Inventory Level		0.02	0.01	-0.24	-0.29	-3.77	-0.09
Change in TTM Sales vs. Accounts Receivable		-0.75	-0.59	-1.09	-2.26	-0.30	0.10
Working Capital Accruals		-0.22	-1.32	-1.56	-1.25	1.22	-1.17
1-yr Growth in TTM Free Cash Flow	Historical Growth	2.29	1.49	1.11	-0.04	-1.80	2.03
Reinvestment Rate		1.12	-1.97	0.21	-0.09	-2.09	-1.73
Average Monthly Trading Volume-to-Market Cap	Liquidity, Risk & Size	-2.48	1.10	-3.22	-4.65	0.45	2.16
60-Month Beta		-5.46	-3.16	-5.73	-2.30	-3.44	-3.24
Asset Quality Index		-1.67	-1.56	1.19	-1.65	0.09	0.46
Operating Leverage		-0.14	-0.54	-1.04	0.25	-1.74	0.66
Natural Logarithm of Market Capitalization		-5.71	-2.63	-0.30	-6.80	-0.64	-0.16
2-Year Ahead EPS Growth	Earnings Momentum	2.06	-0.43	-0.88	2.08	2.51	0.50
3-M Revision in FY2 EPS Forecasts		0.51	-1.17	1.69	1.43	2.64	1.64
Real Earnings Surprise		-2.17	0.51	-1.06	-2.18	-1.30	0.28
24-Month Value at Risk	Price Momentum	-1.52	-3.42	-0.49	-2.67	3.23	-0.65
5-day Industry Relative Return		3.95	-0.24	3.69	-3.30	0.92	1.50
Industry-adjusted 12-month Relative Price Strength		4.48	3.58	1.86	3.57	-2.81	1.84
Rational Decay Alpha		4.07	-0.26	1.72	3.72	1.03	-0.07
Demand Supply Ratio	Short Sentiment	1.16	0.82	-0.35	-1.26	-3.47	0.05
Implied Loan Rate		-0.15	2.54	-2.06	-1.12	-3.31	1.63

Source: IHS Markit

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United States

US Large Cap

Operating conditions across the manufacturing sector continued to improve in January, with the strongest upturn since March 2015. The PMI registered at 55.5, up from 55.1 in December. However, this was partially offset by a slowdown in the service sector, with the services PMI coming in at 53.3 in January, down from 53.7 in December. The strong finish for stocks in 2017, with the best annual gains since 2013, carried over to January, marking the best month since March 2016, even with the turndown at the end of the month on concerns surrounding the bond selloff.

With the strong markets realized for most of the month, Price Momentum signals were among the top performers in January (Table 2), led by Fama-French Momentum (8.06%). High quality names also outperformed as captured by measures including Attention Span Ratio (9.19%) and Trailing 12-Month Sales to Invested Capital (7.53%).

We also highlight Yield Curve Slope Sensitivity (7.41%) which more than doubled the prior month performance (Figure 1) as investors bid up stocks which are poised to benefit from a steepening yield curve, perhaps taking Bill Gross and Ray Dalio's words to heart regarding the prospects of a bond bear market. This in turn affected some bottom performing factors (Table 3) such as Leading 1-Year Regular Dividend Payout (-6.38%) which has a -0.44 IC correlation with this macro indicator over the past five years.

Table 2

US Large Cap top decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Attention Span Ratio	9.19	Management Quality
Fama-French Momentum	8.06	Price Momentum
Number of Analyst Coverage	7.58	Liquidity, Risk & Size
Trailing 12-Month Sales to Invested Capital	7.53	Management Quality
30-75 Week Stock Price Ratio	7.49	Price Momentum
Fixed Assets Turnover Ratio	7.48	Management Quality
Yield Curve Slope Sensitivity	7.41	Macro
18-Month Active Return with 1-Month Lag	7.31	Price Momentum
Second Preceding 6-month Return	7.24	Price Momentum
Asia-Pacific Sales Exposure	7.14	Macro
12-Month Active Return with 1-month Lag	7.12	Price Momentum
Cash to Enterprise Value	6.96	Deep Value
Operating Liability Leverage	6.77	Management Quality
Net Operating Asset Turnover	6.65	Management Quality
TTM Free Cash Flow-to-TTM Sales	6.50	Management Quality

Source: IHS Markit

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Figure 1

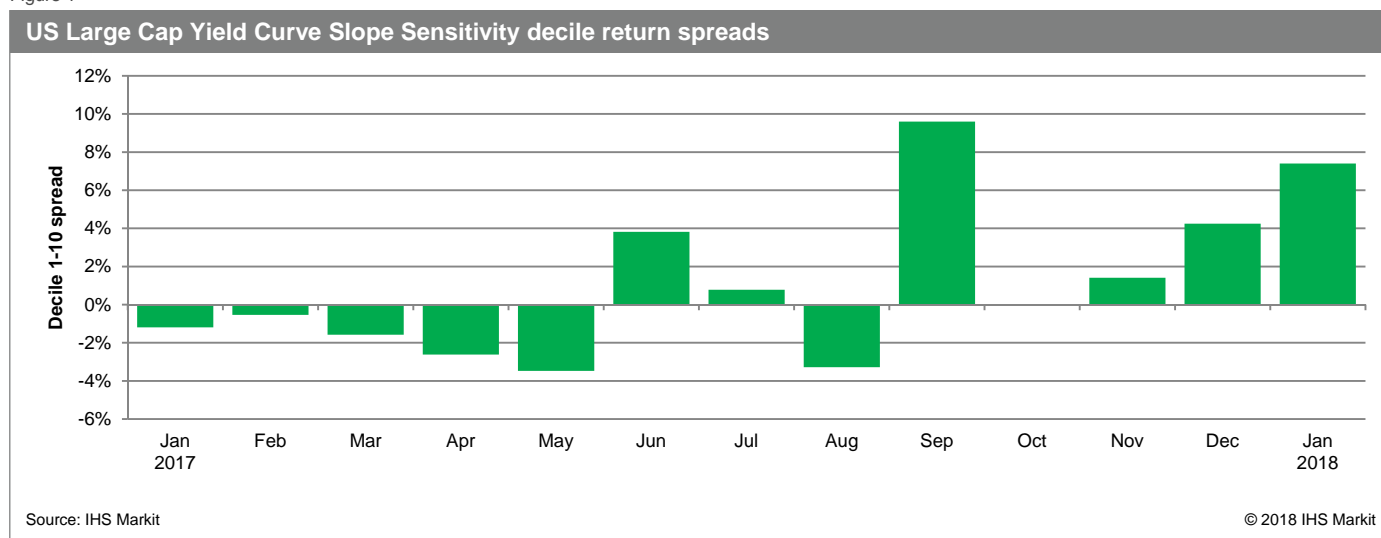


Table 3

US Large Cap bottom decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Operating Cash Flow Profit Margin	-6.67	Management Quality
Market Volatility Sensitivity	-6.52	Macro
Operating Profit Margin	-6.48	Management Quality
Leading 1-Year Regular Dividend Payout	-6.38	Dividend Forecast
Shareholder Payout to Gross Profit	-6.36	Management Quality
Net Cash to Equity	-6.33	Liquidity, Risk & Size
Asset Composition	-6.22	Liquidity, Risk & Size
Working Capital to Inventory	-6.15	Management Quality
Revenue per Employee	-6.00	Management Quality
Aggregate Gamma	-5.81	Liquidity, Risk & Size

Source: IHS Markit

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US Small Cap

Management Quality was also a top performing style for small caps in January (Table 4). Operating Liability Leverage (7.24%) led the way, posting its strongest performance since November 2016 with a 7.5 month-on-month percentage point swing in spread (Figure 2). EMEA Sales Exposure (4.39%) also outperformed as the dollar weakened in January. On the other hand, Deep Value measures reversed course, now making up some of the weakest performing factors for the month (Table 5). TTM Operating Income to Enterprise Value (-6.05%) saw the largest drawdown, experiencing an 8.7 percentage point drop in performance from the prior month.

Table 4

US Small Cap top decile return spread factor performance, Jan 2018

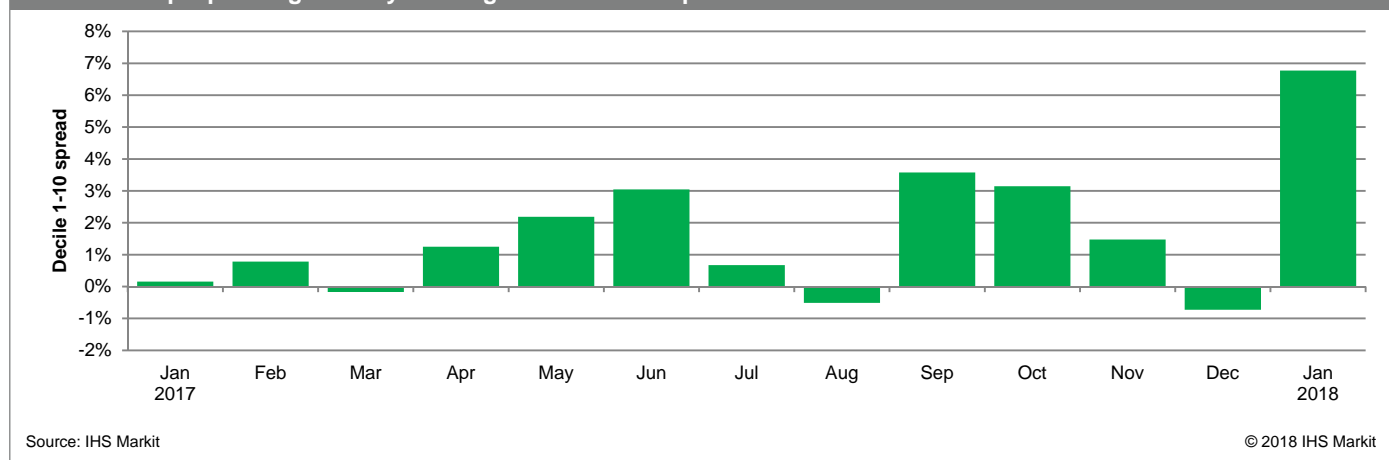
Factor	Decile spread (%)	Factor group
Operating Liability Leverage	7.24	Management Quality
Attention Span Ratio	6.98	Management Quality
1 Year Change in Gross Profit to Assets	4.66	Management Quality
EMEA Sales Exposure	4.39	Macro
TTM Gross Profit Margin	4.08	Management Quality
20-Day Average of Bid-Ask Spread-to-Price	3.99	Liquidity, Risk & Size
Number of Analyst Coverage	3.96	Liquidity, Risk & Size
4-Quarter Sales Acceleration	3.79	Historical Growth
Industry Relative Leading 4-QTRs EPS to Price	3.74	Relative Value
Industry-adjusted 12-month Relative Price Strength	3.58	Price Momentum
1-yr Change in Asset Turnover Ratio	3.36	Historical Growth
Prior Fiscal Quarter Forecast Error	3.36	Earnings Momentum
Earnings Shortfall	3.33	Earnings Quality
30-75 Week Stock Price Ratio	3.31	Price Momentum
12-Month Active Return with 1-month Lag	3.17	Price Momentum

Source: IHS Markit

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Figure 2

US Small Cap Operating Liability Leverage decile return spreads



Source: IHS Markit

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Table 5

US Small Cap bottom decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
TTM Operating Income to Enterprise Value	-6.05	Deep Value
24-Month Residual Return Variance	-5.87	Price Momentum
Time Weighted EBITDA/ EV	-5.81	Deep Value
1-Year Trough Operating Margin	-5.24	Management Quality
Industry-relative TTM Sales to Enterprise Value	-5.20	Relative Value
Stock Return Volatility	-5.14	Liquidity, Risk & Size
TTM EBITDA-to-Enterprise Value	-5.08	Deep Value
Price Above Last 260-day Lowest Trading Price	-5.02	Price Momentum
Operating Profit Margin	-5.00	Management Quality
Asset Composition	-4.98	Liquidity, Risk & Size

Source: IHS Markit

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Europe

The eurozone economy carried over its recent advance into the start of 2018, with the composite PMI coming in at 58.8 in January, its highest level since June 2006. The service sector PMI contributed with a near ten-and-a-half year high of 58.0, though the manufacturing sector PMI detracted somewhat with a decrease to 59.6, down from December's record high of 60.6. The stock market's strongest annual advance also carried over into January, as most European benchmarks finished positive for the month, with the exception of the UK.

Momentum was a powerful signal in the Developed Europe universe in January (Table 6) after a two-month respite. The top Price Momentum factor for the month was 18-Month Active Return with 1-Month Lag (7.32%), with an 8.4 month-on-month percentage point swing in performance. 2-Year Projected EPS Growth (5.62%) took the lead among Earnings Momentum metrics (Figure 3) and, what is more, posted its best performance since the peak of the internet bubble. Investors also rewarded the highest beta names, pushing factors such as Product of Beta and Sigma (-5.81%) and 60-Month Beta (-5.73%) to the top of the laggard board (Table 7).

Table 6

Developed Europe top decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
18-Month Active Return with 1-Month Lag	7.32	Price Momentum
2-Year Projected EPS Growth	5.62	Earnings Momentum
12-Month Active Return with 1-month Lag	5.15	Price Momentum
24-Month Active Return with 1-Month Lag	4.68	Price Momentum
30-75 Week Stock Price Ratio	4.61	Price Momentum
Operating Liability Leverage	4.47	Management Quality
Second Preceding 6-month Return	4.30	Price Momentum
9-Month Active Return with 1-Month Lag	4.30	Price Momentum
39-Week Return with 4-week Lag	4.12	Price Momentum
Fama-French Momentum	4.05	Price Momentum
50-200 Day Stock Price Ratio	3.91	Price Momentum
6-Month Active Return with 1-Month Lag	3.78	Price Momentum
5-day Industry Relative Return	3.69	Price Momentum
Net Asset Value to Price	3.65	Deep Value
Attention Span Ratio	3.52	Management Quality

Source: IHS Markit

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Figure 3

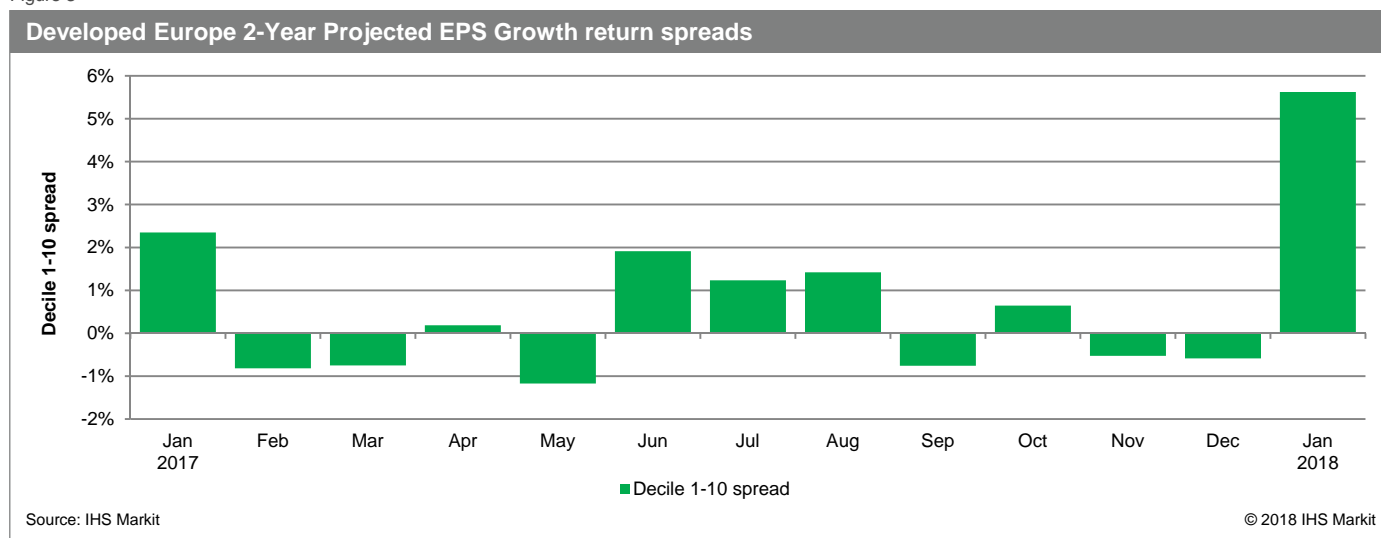


Table 7

Developed Europe bottom decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Product of Beta and Sigma	-5.81	Liquidity, Risk & Size
60-Month Beta	-5.73	Liquidity, Risk & Size
Leading 12 Month Total Dividend Yield	-4.51	Dividend Forecast
60-Month Active Return with 1-Month Lag	-4.48	Price Momentum
Leading 12 Month Regular Dividend Yield	-4.44	Dividend Forecast
Cash & Equivalents-to-Current Liabilities	-4.36	Liquidity, Risk & Size
Edwards-Bell-Ohlson Value-to-Price	-4.29	Deep Value
Industry Relative TTM Dividend Yield	-4.01	Relative Value
TTM Dividend Yield	-3.99	Deep Value
Industry Relative Leading 4-QTRs EPS to Price	-3.78	Relative Value

Source: IHS Markit © 2018 IHS Markit

Asia-Pacific

Manufacturing operating conditions in the two largest Asian economies started the year on a continued uptrend. In Japan, the service and manufacturing sectors expanded concurrently, with PMIs increasing to 51.9 (51.1 in December) and 54.8 (54.0 in December), respectively. Expansionary activity was also signaled in Chinese services and manufacturing sectors, with the service PMI accelerating to 54.7 (53.9 in December) and the manufacturing PMI holding steady at 51.5 in January. Buoyant economic growth has supported Asian stocks with 2017 market gains extending into January.

Valuation remained a key theme among the list of top performing factors in the Developed Pacific exJapan universe in January (Table 8). Cash-to-Price, in particular, posted a robust 11.85% spread, tuning in its best performance since April 2015 as investors flocked to the most undervalued (D1) names (Figure 4). Stocks with the highest estimated earnings dispersion relative to price also outperformed, pushing factors such as Std Dev of FY1 EPS Estimates-to-Price (-6.85%) onto the list of the weakest performing indicators for the month (Table 9).

In Japanese markets, a broad range of styles were represented on the list of top performing factors in January (Table 10). Included are measures such as Operating Profit Margin (4.03%), 2-Year Projected EPS Growth (3.98%), Yearly TTM Total Sales Growth Rate (3.46%) and 24-Month Active Return with 1-Month Lag (3.28%). At the opposite extreme, however, five of the 10 weakest performing factors (Table 11) were concentrated in the Deep Value style. TTM-Sales-to-Price (-5.26%) was the weakest of the bunch, with the top six deciles posting mostly neutral performance, while the most overvalued names in the bottom four deciles saw much stronger returns, averaging 3.0% (Figure 5).

Table 8

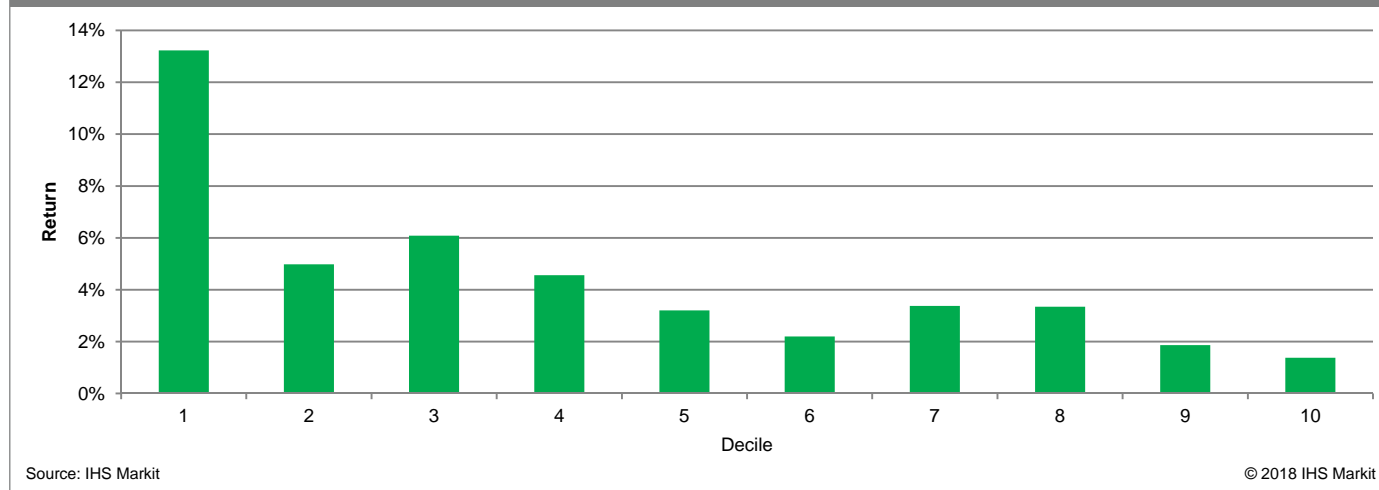
Developed Pacific exJapan top decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Cash-to-Price	11.85	Deep Value
Cash to Enterprise Value	10.06	Deep Value
Current Liabilities-to-Price	9.55	Liquidity, Risk & Size
Market Leverage	9.05	Liquidity, Risk & Size
Market Cap per Analyst	7.92	Liquidity, Risk & Size
Natural Logarithm of Total Assets	7.37	Liquidity, Risk & Size
Net Asset Value to Price	7.36	Deep Value
Operating Liability Leverage	7.26	Management Quality
Street Consensus Rating	7.13	Earnings Momentum
Attention Span Ratio	7.12	Management Quality
Industry Relative TTM EBITDA-to-Price	6.88	Relative Value
Second Preceding 6-month Return	6.73	Price Momentum
2-Year Projected EPS Growth	6.64	Earnings Momentum
Book Leverage	6.60	Liquidity, Risk & Size
Natural Logarithm of TTM Sales	6.60	Liquidity, Risk & Size

Source: IHS Markit

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Figure 4

Developed Pacific exJapan Cash-to-Price decile returns, Jan 2018


Source: IHS Markit

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Table 9

Developed Pacific exJapan bottom decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Cash Cycle	-12.41	Management Quality
Inventory-to-Total Assets	-8.97	Management Quality
Debt to Market Cap	-8.90	Liquidity, Risk & Size
Std Dev of FY1 EPS Estimates-to-Price	-6.85	Earnings Momentum
Natural Logarithm of Market Capitalization	-6.80	Liquidity, Risk & Size
Std Dev of FY2 EPS Estimates-to-Price	-6.14	Earnings Momentum
Stock Illiquidity	-6.12	Liquidity, Risk & Size
20-Day Volume Volatility to Price Volatility	-5.83	Liquidity, Risk & Size
Long-term Debt-to-Cash Flow	-5.76	Liquidity, Risk & Size
Cash-to-Sales	-5.74	Management Quality

Source: IHS Markit

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Table 10

Japan Standard Cap top decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Operating Profit Margin	4.03	Management Quality
2-Year Projected EPS Growth	3.98	Earnings Momentum
Yearly TTM Total Sales Growth Rate	3.46	Historical Growth
3-yr Compound Annual Sales Growth	3.40	Historical Growth
Shareholder Payout to Gross Profit	3.39	Management Quality
1-yr Change in Operating Profit Margin	3.35	Historical Growth
24-Month Active Return with 1-Month Lag	3.28	Price Momentum
24-Month Value at Risk	3.23	Price Momentum
Oil Prices Sensitivity	3.20	Macro
Street Revision Confidence	3.15	Earnings Momentum
TTM Gross Profit Margin	3.10	Management Quality
3-M Revision in FY1 EPS Forecasts	3.06	Earnings Momentum
Net Profit Margin	3.01	Management Quality
Averaged Last 6-M EPS Revisions for FY2	2.95	Earnings Momentum
Lagged Inverse of PEG Ratio	2.87	Earnings Momentum

Source: IHS Markit

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Table 11

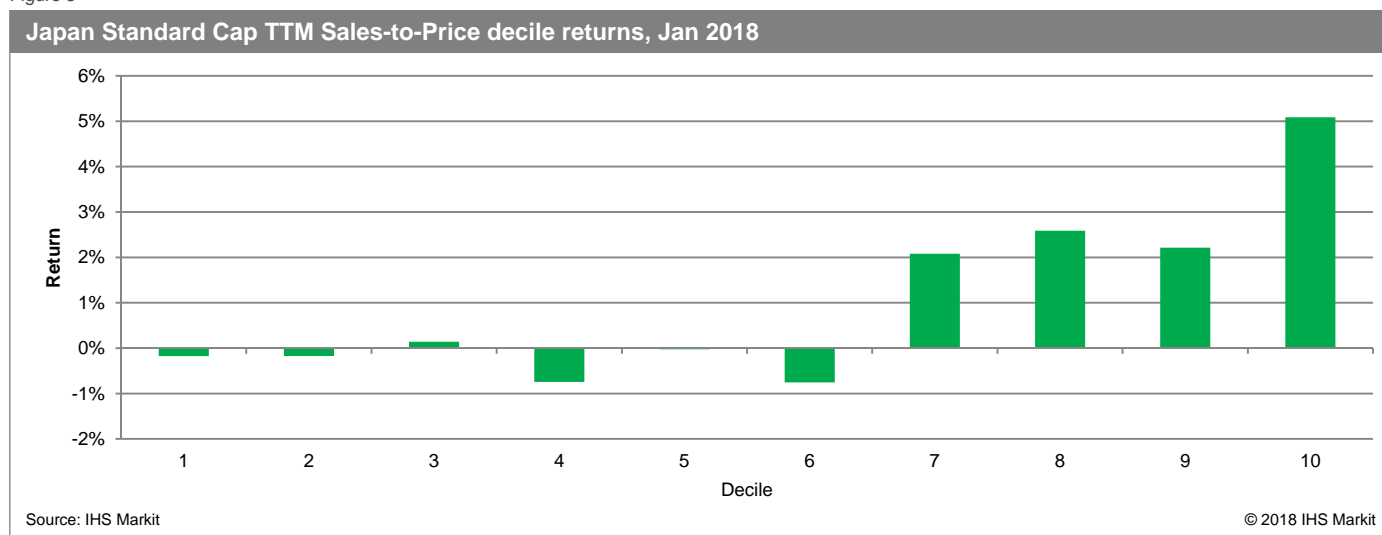
Japan Standard Cap bottom decile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
Average Trading Volume in Preceding 6-month	-6.42	Price Momentum
Trading Turnover Ratio	-6.24	Liquidity, Risk & Size
Cash-to-Sales	-6.06	Management Quality
TTM Sales-to-Price	-5.26	Deep Value
TTM Gross Profit to Assets	-4.93	Management Quality
TTM Operating Income to Enterprise Value	-4.71	Deep Value
TTM Sales-to-Enterprise Value	-4.69	Deep Value
Leading 12 Month Sales Yield	-4.64	Deep Value
Time Weighted Sales Yield	-4.62	Deep Value
Working Capital-to-Trailing 12-Month Sales	-4.42	Management Quality

Source: IHS Markit

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Figure 5



Emerging Markets

Rounding out our review with emerging markets, we find that valuation and long-term price reversal metrics ran the totality of the factor leaderboard in January (Table 12). Deep Value measures included Cash-to-Price (4.26%), Time Weighted Book Yield (3.70%) and TTM EBITDA-to-Price (3.66%). However, 60-Month Active Return with 12-Month Lag (6.66%) resided at the top of the board, while 60-Month Beta (-3.24%) topped the laggard board (Table 13). Both factors saw monotonic distributions across their quintile returns (Figure 6), suggesting that investors traded systematically across stocks which have missed out on strong market returns and the highest beta names.

Table 12

Emerging Markets top quintile return spread factor performance, Jan 2018

Factor	Decile spread (%)	Factor group
60-Month Active Return with 12-Month Lag	6.66	Price Momentum
60-Month Alpha	5.58	Price Momentum
60-Month Active Return with 1-Month Lag	4.31	Price Momentum
Cash-to-Price	4.26	Deep Value
Cash to Enterprise Value	3.84	Deep Value
Time Weighted Book Yield	3.70	Deep Value
TTM EBITDA-to-Price	3.66	Deep Value
TTM Cash Flow-to-Price	3.63	Deep Value
Price-to-Total Assets	3.59	Deep Value
Graham Number Fair Value Premium	3.48	Deep Value
Net Asset Value to Price	3.46	Deep Value
Time Weighted Cash Yield	3.25	Deep Value
Price-to-Book Return-on-Equity Combination (PB-ROE)	3.16	Deep Value
Tobin q	3.10	Liquidity, Risk & Size
Leading 12 Month Book Yield	3.08	Deep Value

Source: IHS Markit

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Table 13

Emerging Markets bottom quintile return spread factor performance, Jan 2018

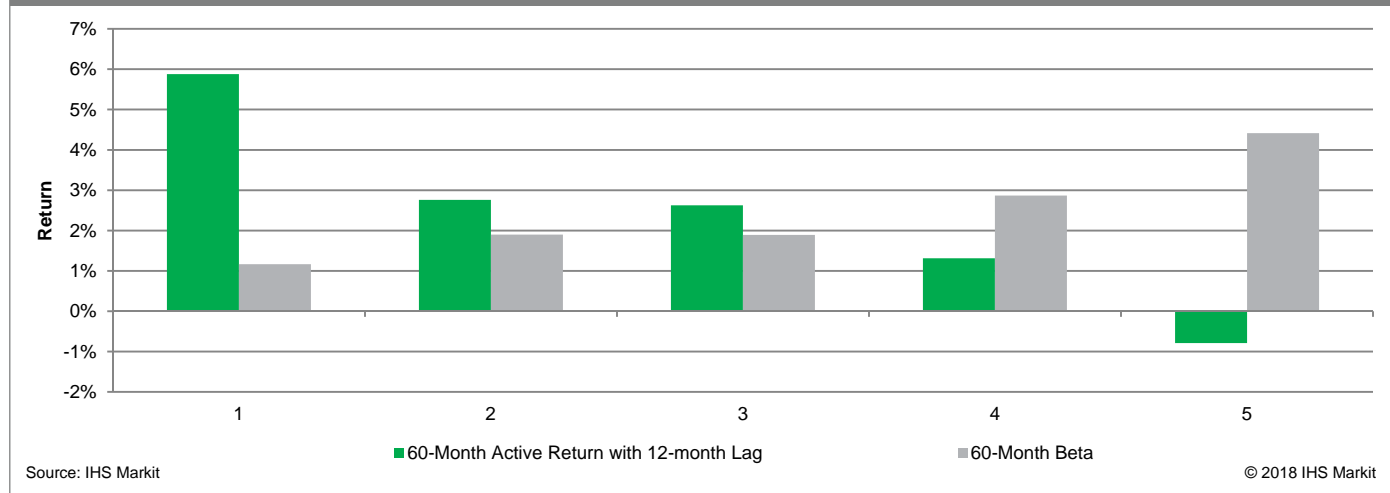
Factor	Decile spread (%)	Factor group
60-Month Beta	-3.24	Liquidity, Risk & Size
Housing Starts Sensitivity	-3.05	Macro
Cash-to-Sales	-2.81	Management Quality
Std Dev of FY1 EPS Estimates-to-Price	-2.70	Earnings Momentum
Retained Earnings-to-Total Assets	-2.56	Management Quality
Market Volatility Sensitivity	-2.30	Macro
Product of Beta and Sigma	-2.20	Liquidity, Risk & Size
Cash & Equivalents-to-Current Liabilities	-2.20	Liquidity, Risk & Size
Asia-Pacific Sales Exposure	-2.12	Macro
Long-Term Growth Rate Estimates	-2.10	Earnings Momentum

Source: IHS Markit

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Figure 6

Emerging Markets quintile returns, January 2018



Source: IHS Markit

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